WHAT IS CLAIMED IS:

1.   A processor-based method for communicating between cellular modem software and application engine software, both software running concurrently on a communications device, comprising:

    providing a communications module that facilitates communications between the cellular modem software and the application engine software;

    invoking from the communications module a generic function in response to a service request from the application engine software;

    transforming the generic function to a specific function of the cellular modem software; and

    invoking the specific function of the cellular modem software.

2.   The method of Claim 1, further comprising:

    sending a specific reply of the cellular modem software targeted for the communications module in response to the specific function;

    transforming the specific reply to a generic reply; and

    sending the generic reply to the communications module.

3.   The method of Claim 1, wherein the communications module comprises a telephony module.

4.   The method of Claim 1, wherein the application engine software includes the Symbian operating system.

5.   The method of Claim 4, wherein the communications module comprises a Telephony Server Module (TSY) compatible with the Symbian ETEL.

6.   The method of Claim 1, wherein invoking from the communications module the generic function comprises forming one or more abstract primitives based on the generic function.

1   7.   The method of Claim 6, wherein transforming the generic function to the

2 specific function of the cellular modem software comprises forming one or more concrete

3 primitives that inherit characteristics from the one or more abstract primitives to form the

4 specific function.

1   8.   A processor-based method for communicating between cellular modem

2 software and application engine software, both software running concurrently on a

3 communications device, comprising:

4   providing a communications module that facilitates communications

5 between the cellular modem software and the application engine software;

6   invoking from the cellular modem software a specific function targeted for

7 the communications module in response to a hardware event;

8   transforming the specific function to a generic function of the

9 communications module; and

10   invoking a method of the application engine software via the generic

11 function of the communications module.

1   9.   The method of Claim 8, further comprising:

2   sending in response to the method of the application engine software a generic

3 reply of the communications module targeted for the cellular modem software;

4   transforming the generic reply to a specific reply of the cellular modem software;

5 and

6   sending the specific reply to the cellular modem software.

1   10.   The method of Claim 8, wherein the communications module comprises a

2 telephony module.

1   11.   The method of Claim 8, wherein the application engine software includes

2 the Symbian operating system.

1   12.   The method of Claim 11, wherein the communications module comprises a
2 Telephony Server Module (TSY) compatible with the Symbian ETEL.

1   13.   The method of Claim 8, wherein invoking from the cellular modem
2 software the specific function comprises forming the specific function from one or more
3 concrete primitives associated with the cellular modem software.

1   14.   The method of Claim 13, wherein the concrete primitives inherit
2 characteristics from one or more abstract primitives, and wherein transforming the specific
3 function to the generic function of the communications module comprises forming the
4 generic function from the one or more abstract primitives.

1   15.   A computer-readable medium configured with instructions for causing one
2 or more processors of a data processing arrangement having concurrently running cellular
3 modem software and application engine software to perform steps comprising:
4   invoking a generic function of a communications module of the data processing
5 arrangement in response to a service request from the application engine software;
6   transforming the generic function to a specific function of the cellular modem
7 software; and
8   invoking the specific function of the cellular modem software.

1   16.   The computer-readable medium of Claim 15, wherein the communications
2 module comprises a telephony module.

1   17.   The computer-readable medium of Claim 15, wherein the communications
2 module comprises a Telephony Server Module (TSY) compatible with Symbian ETEL.

1   18.   The computer-readable medium of Claim 15, wherein invoking from the
2 communications module the generic function comprises forming one or more abstract
3 primitives based on the generic function.

1   19.   The computer-readable medium of Claim 18, wherein transforming the
2 generic function to the specific function of the cellular modem software comprises forming
3 one or more concrete primitives that inherit characteristics from the one or more abstract
4 primitives to form the specific function.

1   20.   A computer-readable medium configured with instructions for causing a
2 processor of a data processing arrangement having cellular modem software and
3 application engine software to perform steps comprising:
4   invoking from the cellular modem software a specific function in response
5 to a hardware event targeted for the application engine software;
6   transforming the specific function to a generic function of a
7 communications module of the data processing arrangement; and
8   invoking a method of the application engine software via the generic
9 function of the communications module.

1   21.   The computer-readable medium of Claim 20, wherein the communications
2 module comprises a telephony module.

1   22.   The computer-readable medium of Claim 20, wherein the communications
2 module comprises a Telephony Server Module (TSY) compatible with Symbian ETEL.

1   23.   The computer-readable medium of Claim 20, wherein invoking from the
2 cellular modem software the specific function comprises forming the specific function
3 from one or more concrete primitives associated with the cellular modem software.

1 24. The computer-readable medium of Claim 23, wherein the concrete

2 primitives inherit characteristics from one or more abstract primitives, and wherein

3 transforming the specific function to the generic function of the communications module

4 comprises forming the generic function from the one or more abstract primitives.

1 25. A data terminal comprising:

2 a memory storing a communications module; and

3 one or more processors coupled to the memory and operable by cellular modem

4 software and application engine software, the processors operable to exchange data

5 between the cellular modem software and the application engine software by,

6 processing communications between the communications module and the

7 application engine software;

8 processing generic functions of the communications module to

9 communicate with the communications module;

10 processing specific functions of the cellular modem software to

11 communicate with the cellular modem software; and

12 translating between generic functions of the communications module and

13 specific functions of the cellular modem software to facilitate communications

14 therebetween.

1 26. The data terminal of Claim 25, wherein the communications module

2 comprises a telephony module.

1 27. The data terminal of Claim 25, wherein the communications module

2 comprises a Telephony Server Module (TSY) compatible with Symbian ETEL.

1   28.   The data terminal of Claim 25, wherein translating between generic

2   functions of the communications module and specific functions of the cellular modem

3   software comprises basing the generic functions on one or more abstract primitives and

4   basing the specific functions on one or more concrete primitives associated with the

5   cellular modem software, the concrete primitives inheriting characteristics from the

6   abstract primitives.

1   29.   A data terminal comprising:

2   means for operating cellular modem software and application engine software on

3   the data terminal;

4   means for processing communications between the application engine software and

5   a communications module of the data terminal;

6   means for processing generic functions of the communications module to

7   communicate with the communications module;

8   means for processing specific functions of the cellular modem software to

9   communicate with the cellular modem software; and

10   means for translating between generic functions of the communications module and

11   specific functions of the cellular modem software to facilitate communications

12   therebetween.